

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. The method of making conical connectors for use in HVAC ducting, comprising:

placing a conically shaped workpiece of thin gauge metallic material into engagement with a spin die, the spin die having at least one generally cylindrically shaped surface portion;

spinning the conically shaped workpiece about its longitudinal central axis; and

forming the conically shaped workpiece as the workpiece is spinning to conform the workpiece to the shape of the spin die generally cylindrically shaped surface portion.

2. The method according to Claim 1, wherein the spin die has two generally cylindrically shaped surfaces and the workpiece is formed during spinning of the workpiece to conform to the shape of both generally cylindrically shaped surfaces.

3. The method according to Claim 2, wherein the generally cylindrically shaped surfaces have different diameters.

4. The method according to Claim 2, wherein the spin die is positioned within the workpiece.

5. The method according to Claim 2, wherein the workpiece is positioned within the spin die.

6. The method according to Claim 2, wherein the workpiece is formed against the concentric surfaces of the spin die.

7. The method according to Claim 1, wherein the spin die is positioned within the workpiece.

8. The method according to Claim 1, wherein the workpiece is positioned within the spin die.

9. The method according to Claim 1, wherein the workpiece is formed against the generally cylindrically shaped surface of the spin die.

10. The method according to Claim 1, further comprising forming a mating flange at at least one longitudinal end portion of the workpiece by spinning the workpiece and as the workpiece is spinning expanding the at least one end portion of the workpiece to form a generally annularly shaped mating flange portion extending generally transversely to the longitudinal central axis of the remainder of the workpiece.

11. The method according to Claim 10, further comprising creating a hem section from the outer perimeter portion of the mating flange while the workpiece is spinning by forming the outer perimeter portion of the mating flange to extend away from the surface of the mating flange to be disposed substantially concentrically to the longitudinal central axis of the workpiece.

12. The method according to Claim 11, further comprising forming a return flange by turning a portion of the hem section located distally from the mating flange over on itself.